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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,587	11/24/2003	Dinesh Chopra	M4065.0152/P152-C	1234

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DICKSTEIN SHAPIRO LLP  
1825 EYE STREET NW  
Washington, DC 20006-5403

EXAMINER
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MORGAN, EILEEN P

ART UNIT	PAPER NUMBER
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3723

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/718,587

Applicant(s)

CHOPRA ET AL.

Examiner

Eileen P. Morgan

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 35-48,55 and 57-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-48,55,57-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 45-48,55,57-59 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added subject matter that the conditioning device is adjustable 'during a conditioning process' is not disclosed in the original specification. The specification discloses that the finished wafer is measured, those measurements are updated and then the conditioning is adjusted based on those updated measurements(Figure 13). The newly added subject matter calls for the wafer to be measured at the same time of conditioning,i.e. 'in situ', and this is not part of the original specification. The newly added subject matter to claim 55 that the conditioning device moves along 'the direction of rotation of said roller segments' is new matter. The original specification only states that the conditioning device moves longitudinally with respect to pad.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 35,36,40-45,47-48 rejected under 35 U.S.C. 102(e) as being anticipated by Shendon et al.-5,775,983.

Shendon discloses conditioning a glazed polishing pad with a conditioner having coaxially aligned roller segments (102,104) having a knurled surface of different heights and applied at different pressures for various conditioning of pad (col. 5, lines 20, 25, col. 6, line 65), wherein the roller segments rotate at various speeds (col. 7, line 24), the tool (100) being movable relative to pad via (512-col.6, line 27), wherein said pad (603) is moved relative to roller segments (col. 4, line 7), and wherein a roller can be non-cylindrical (716). The conditioning device is adjustable, such as by making different patterns and using different forces to embed pattern. This conditioning operation is directly related to the surface characteristics of the workpiece. Col. 1, lines 15-56 state, that the condition of the pad effects the uniformity and material removal rate of the workpiece. When the rate decreases and uniformity is not accurate, the pad must be conditioned.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 37 and 38 rejected under 35 U.S.C. 103(a) as being unpatentable over Shendon, alone.

Shendon discloses the claimed invention, as stated above, but does not disclose the particulars of the driving arrangement of the rollers. However, to have a drive shaft with gears to rotate a roller would have been an obvious design choice since this configuration is old and well-known in the art and would be within the level of ordinary skill.

Claims 39, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shendon in view of Labunsky et al.-6,086,460.

Shendon discloses the claimed invention, as stated above, but does not disclose the rollers being driven electrically. However, Labunsky teaches conditioning a polishing web with a cylindrical roller that is driven by a motor. Therefore, it would have been obvious at time invention was made to one of ordinary skill in the art to provide the rollers of Shendon with motors, as taught by Labunsky, in order to precisely control speed of rollers for more accurate conditioning.

Claims 46,55,57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shendon in view of Yau-6,139,404.

Shendon discloses the claimed invention, as stated above, but does not disclose the rollers moving longitudinal with respect to a polishing web. However, Yau teaches conditioning a polishing web with a cylindrical roller that is driven by a motor and capable of longitudinal movement (82). Therefore, it would have been obvious at time invention was made to one of ordinary skill in the art to provide the conditioner of Shendon with longitudinal movement, as taught by Yau, in order to be used on a polishing web and to thoroughly condition all areas of pad.

### ***Response to Arguments***

Applicant's arguments filed 10-26-06 have been fully considered but they are not persuasive. On pages 6-7, Applicant alleges that Shendon does not disclose 'moving the glazed polishing surface relative to roller segments and moving the rollers relative to the pad.' However, it is very clear from the specification of Shendon that the rollers rotate and move (via 512) relative to glazed pad (col. 6, line 27) and that the pad moves relative to rollers. Col. 6 discusses this matter at line 48, which states the 'pad is rotated' and shown in Figure 1 by arrow. On page 7, Applicant also states that the conditioner of Shendon is not adjustable during a conditioning process. However, this added subject matter is deemed new matter and therefore has not been treated on the merits. In response to the conditioning process being in response to measurements of

a workpiece, it is upheld to be inherent to condition a pad when the polishing is producing inadequate results on a workpiece due to glazing (col. 1, lines 40-56) and furthermore the conditioner of Shendon is adjustable by being used for one revolution of pad or by being used for several rotations of pad dependent on many variables such as pad non-uniformity. The conditioner may also be adjusted with different pressures and patterns (claim 55 limitation) to be embedded in pad to achieve different results on the pad and thus on the workpiece. (col 6, line56-col. 7, line 4).

On page 8, Applicant argues that Shendon does not show the rollers moving in the direction of the rollers. However, this is deemed new matter and not further treated on the merits. However, this rejection has been changed to a 103 rejection of Shendon in view of Yau. Yau is relied upon to teach a cylindrical conditioner rotating and moving in direction of the roller or 'longitudinal'.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eileen P. Morgan whose telephone number is 571.272.4488. The examiner can normally be reached on Monday-Thursday, 7am-3:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571.272.4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EM  
January 16, 2007



Eileen P. Morgan  
Primary Examiner